

„Fauna Lepidopterologica Volgo-Uralensis“ 150 years later: Changes and additions. Part 14. Elachistidae.

(Insecta, Lepidoptera)

by

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Summary: 65 species of Elachistidae are listed from the Volgo-Ural Region. 64 species are recorded from the region in addition to EVERSMAHN's list.

Introduction: This paper is the 14th in a series of publications¹, dealing with the composition of the present-day fauna of the family Elachistidae in the Middle Volga and the south-western Cisurals. This region comprises of the administrative divisions of Astrakhan-, Volgograd-, Saratov-, Samara-, Uljanovsk-, Orenburg-, Uralsk- and Atyraus-(=Gurjev) Districts, together with Tataria and Bashkiria. As was accepted in previous parts of this series, only material reliably labeled and spanning mostly the last 25-50 years was used for this study. The main collections are those of the authors: V. ANIKIN (Saratov and Astrakhan Distr. and Kalmyk Republic), S. SACHKOV (Samara Distr.) and V. ZOLOTUHN (Uljanovsk and Astrakhan Distr.). Whilst completing this list we also took advantage of the information from recent papers on this region (SACHKOV, 1996; SACHKOV et al., 1996; ZOLOTUHN, 2001; KAILA et al., 2003). The material in the collections of the Zoological Institute of the Russian Academy of Sciences (St. Petersburg) has also been examined for our study.

In the text we follow more traditional system proposed by E. TRAUGOTT-OLSEN and E. SCHMIDT NIELSEN (1977) and used in the main regional catalogs and determination keys (FALKOVITSH, 1986; PARENTI, 1996; SINEV & SRUOGA, 1997). The synonymy is taken mainly from the review by L. KAILA (1999). The list of food plants is taken from TRAUGOTT-OLSEN & SCHMIDT NIELSEN (1977).

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For the ease of use, information is given in the form of a table, with the principal data of all species mentioned from the Volgo-Ural region. Many localities have been renamed during the last 150 years, the most important ones being listed below:

¹This series was started in Atalanta 24: 89-120 (1993)

Uralsk - later Chkalov - now Uralsk

Samara - later Kujbyshev - now Samara

Simbirsk - now Uljanovsk

Sarepta - now Krasnoarmejsk of the Volgograd District

Waskuntschatskoi - usually noted as Baskunchak (Astrakhan District)

Zarizyn or Tsarizyn - later Stalingrad - now Volgograd.

Note: Spassk, usually interpreted as EVERSMA^N's estate not far from Orenburg, really might be also a town that disappeared under the Volga's water during the erection of the hydroelectrostations and the following increasing of waters area. Before that Spassk had been situated in about 82 km ESE Kasan on the left bank of Volga.

Notes on the table:

column 1: Species number

- species is deleted from the list

column 2: Species name

column 3: Species listed by EVERSMA^N (1844) within the regional limits of that territory

column 4 - 10: Administrative units

4 Astrakhan District (centre is Astrakhan)

5 Volgograd district (Volgograd)

6 Saratov district (Saratov)

7 Samara district (Samara)

8 Uljanovsk district (Uljanovsk)

9 Bashkiria (Ufa)

10 Uralsk district (Uralsk)

+ species is present

- species not found during this study

? species is known from old or doubtful data

o type locality

column 11: Flight periods

IV -XI - months

b, m, e - beginning, middle, end of month

1 (2) G - species developes 1 (2) generation(s)

W - winter hibernation

column 12: Comments and larval foodplants

L: larval hostplants, *indicating original data

TL: type locality

E: EVERSMA^N

	Species	E V E R S M A N N	A S T R A K H A N D	V O L G O G R A D	S A R A T O V	S A M A R A	U L J A N O V S K	B A S H K O V S K	U R A L S K	Flight period	Comments
1	2	3	4	5	6	7	8	9		11	12
ELACHISTIDAE											
1	<i>Mendesia farinella</i> (THUNBERG, 1794)				-		+	-		VI	Very local in grass steppes on chalk. L.: unknown.
2	<i>Perittia herrichiella</i> (HERRICH-SCHÄFFER, 1855)						?			VI	Only characteristic mines were found in wet and sparse mixed forest on <i>Lonicera xylosteum</i> * The record may also belongs to the next species.
3	<i>Perittia sibirica</i> SINEV, 1992				+			-		eVI- mVII	Recorded also for Orenburg distr. (KAILA et al., 2003). L.: <i>Lonicera tatarica</i> (in Siberia).
4	<i>Dibrachia kalki</i> (PARENTI, 1978)		+		+		+			V-VI	Chalk steppes. Recorded for Orenburg distr. (KAILA et al., 2003). L.: unknown.
5	<i>Hemiprosopa altaica</i> SINEV, 1998	-		-	-					VI	Recorded for the saline wetlands of Orenburg distr. (KAILA et al., 2003). L.: unknown.
6	<i>Elachista acutella</i> KAILA, 2003		-	-	-	-		-		mVI	LT.: Southern Ural, Orenburg distr., Donskoje (KAILA et al., 2003). L.: unknown.

7	<i>Elachista adscitella</i> STANTON, 1851 (= <i>revinctella</i> auct., nec ZELLER, 1850)			-				-	eV-VIII (in 2G)	Recorded for Cheliabinsk distr. (KAILA et al., 2003). L.: <i>Festuca</i> , <i>Deschampsia</i> , <i>Poa</i> , <i>Brachypodium</i> , <i>Sesleria</i> , <i>Milium</i> .
8	<i>Elachista albifrontella</i> (HÜBNER, [1817])					+	+	+	bVI- eVII	Some specimens were collected in wet coniferous forest of taiga- zone, with <i>Abies</i> and <i>Pinus</i> . L.: different Poaceae.
9	<i>Elachista alpinella</i> STANTON, 1854							+	eVII- bVIII	Very local on glades and openings of humid forests. Recorded for Cheliabinsk distr. (KAILA et al., 2003). L.: <i>Carex</i> spp.
10	<i>Elachista anserinella</i> ZELLER, 1839				+	+	+		eV-eVI	Widely distributed in different biotopes but not common everywhere. L.: <i>Brachypodium pinnatum</i> .
11	<i>Elachista apicipunctella</i> STANTON, 1849 (= <i>nobilella</i> auct., nec ZELLER, 1839)					+	+		bVI- eVII	Wet coniferous and mixed forests. Recorded for Cheliabinsk distr. (KAILA et al., 2003). L.: different Poaceae.
12	<i>Elachista arduella</i> KAILA, 2003								VI	LT Southern Ural, Orenburg distr., Pokrovka (KAILA et al., 2003). L.: unknown.
13	<i>Elachista argentella</i> (CLERCK, 1759)				+	+			eV-VI	L.: different Poaceae.
14	<i>Elachista baicalica</i> KAILA, 1992								VI	Recorded for Cheliabinsk distr. (KAILA et al., 2003). L.: unknown.
15	<i>Elachista bedellella</i> (SIRCOM, 1848)					+	+	+	VI-bVIII (in 2G)	Grass steppes. L.: different Poaceae.
16	<i>Elachista ?biatomella</i> (STANTON, 1848)							+	VI-VIII (in 2G)	Recorded for Bashkiriya, Cheliabinsk and Orenburg distr. with question mark (KAILA et al., 2003). L.: <i>Carex flacca</i> .
17	<i>Elachista bifasciella</i> TREITSCHKE, 1833						+	-	VI-bVII	L.: different Poaceae.
18	<i>Elachista bisulcella</i> (DUPONCHEL, 1843)					+	+	-	VI-VII	Lime steppes. L.: <i>Deschampsia</i> , <i>Brachypodium</i> , <i>Calamagrostis</i> , <i>Carex</i> .
19	<i>Elachista canapenella</i> (HÜBNER, [1813]) (= <i>pulchella</i> HAWORTH, 1828)					+	+	-	eIV-VIII (in 2G)	Humid mixed forest. L.: <i>Holcus mollis</i> , <i>Arrhenatherum pubescens</i> .
20	<i>Elachista chamaea</i> KAILA, 2003	-			-				eV-VI	Recorded for Orenburg distr. (KAILA et al., 2003). L.: unknown.
21	<i>Elachista chrysodesmella</i> ZELLER, 1850				+	-	-	-	mV-VIII (in 2G)	L.: <i>Holcus</i> , <i>Poa</i> , <i>Brachypodium</i> , <i>Carex</i> .
22	<i>Elachista cingilella</i> (HERRICH-SCHÄFFER, 1855)								mV-VIII (in 2G)	Recorded for Orenburg distr. (KAILA et al., 2003). L.: <i>Milium effusum</i> .
23	<i>Elachista constitella</i> FREY, 1859								eV-mVI	Recorded for Orenburg distr. (KAILA et al., 2003). L.: unknown.
24	<i>Elachista diederichsiella</i> E.HERING, 1889	-							bVI- mVII	Recorded for Cheliabinsk distr. (KAILA et al., 2003). L.: <i>Milium effusum</i> .
25	<i>Elachista dispunctella</i> (DUPONCHEL, 1843)				+	+		-	V-VIII (in 2G)	Dry and open grasslands. L.: <i>Festuca</i> spp
26	<i>Elachista fasciola</i> PARENTI, 1983					+			mV- eVII (in 2G?)	A single male collected 22.VII 1992 in forest-steppe (SACHKOV, 1996). Recorded for Cheliabinsk

											and Orenburg distr. (KAILA et al., 2003). L.: unknown.
27	<i>Elachista festucicolella</i> ZELLER, 1853					+				eV-VI	Limestone and chalk steppes. L.: <i>Festuca</i> spp.
28	<i>Elachista flavescens</i> PARENTI, 1981			+						VI	Recorded for Orenburg distr (KAILA et al., 2003). L.: unknown.
29	<i>Elachista galactitella</i> (EVERSMANN, 1844)		+							mVI- mVII	Described by E. as <i>Oecophora galactitella</i> Evm. TL: "in provincia Casanensi et Orenburgensi" L.: unknown.
30	<i>Elachista gangabella</i> ZELLER, 1850			-						VI-mVII	Recorded for Cheliabinsk distr. (KAILA et al., 2003). L.: <i>Dactylis</i> , <i>Brachypodium</i> , <i>Melica</i> .
31	<i>Elachista gibbera</i> KAILA, 2003					-	-	-	-	eV	LT.: Southern Ural, Cheliabinsk distr., Kizilskiye (KAILA et al., 2003). L.: unknown.
32	<i>Elachista gleichenella</i> (FABRICIUS, 1781)									VI-VII	Recorded for Cheliabinsk distr. (KAILA et al., 2003). L.: <i>Carex</i> spp.
33	<i>Elachista ex gr. gomella</i> NIELSEN & TRAUGOTT-OLSEN, 1987					+	+			eV-mVI	Dry meadows and chalk hills (SACHKOV et al., 1996; ZOLOTUHN, 2001). According to L. KAILA (pers. comm.), probably a new species. L.: unknown.
34	<i>Elachista ?griseella</i> (DUPONCHEL, 1842)							+		eV-bVI	Grass and limestone steppes. Determination is very provisional as <i>griseella</i> -complex is a taxonomical problem. L.: unknown.
35	<i>Elachista hedemanni</i> REBEL, 1899 (= <i>tauricella</i> BUDASHKIN & SINEV, 1994)				+	-	+	-		mV- mVI	Grass steppes and lime steppes. L.: unknown.
36	<i>Elachista heringi</i> REBEL, 1899			+			+	+		mV-VI	Steppes of different types. Recorded for Cheliabinsk and Orenburg distr. (KAILA et al., 2003). L.: unknown.
37	<i>Elachista herrichii</i> FREY, 1859 (= <i>reutiana</i> FREY, 1859)							+		mV-VI	Local in grass steppes. Recorded for Cheliabinsk and Orenburg distr. (KAILA et al., 2003). L.: <i>Koeleria</i> , <i>Agrostis</i> , <i>Holcus</i> .
38	<i>Elachista humilis</i> ZELLER, 1850							+		VI-VII	L.: different Poaceae.
39	<i>Elachista littoricola</i> LE MARCHAND, 1938						+	+		eV-VII (in 2G)	Grass and lime steppes. Recorded for Cheliabinsk and Orenburg distr. (KAILA et al., 2003). L.: unknown.
40	<i>Elachista maculicerusella</i> BRUAND, 1859 (= <i>cerusella</i> HÜBNER, 1796)		-		+		+	-	-	eV-VIII (in 2G)	Recorded for Orenburg distr. (KAILA et al., 2003). L.: different Poaceae.
41	<i>Elachista manni</i> TRAUGOTT-OLSEN, 1990									eV	Recorded for Cheliabinsk and Orenburg distr. (KAILA et al., 2003). L.: unknown.
42	<i>Elachista martinii</i> O. HOFMANN, 1898	-	-						-	VI-VII	Recorded for Cheliabinsk distr. (KAILA et al., 2003). L.: <i>Carex humilis</i> .
43	<i>Elachista megagnathos</i> SRUOGA, 1990									mVI	Recorded for Orenburg distr. (KAILA et al., 2003). L.: unknown.
44	<i>Elachista nitidulella</i>	-	-	-	+	-	+	-	-	eV-VI	Limestone steppes. Recorded

	(HERRICH-SCHÄFFER, 1855)										also for Cheliabinsk distr. (KAILA et al., 2003). L.: unknown.
45	<i>Elachista nolckenii</i> SULCS, 1992						-	-	mVI- mVII	Recorded for Cheliabinsk distr. (KAILA et al., 2003). L.: unknown.	
46	<i>Elachista obliquella</i> STANTON, 1854 (= <i>megelella</i> auct., nec HÜBNER, [1810])				+	+	+		eV-VIII (in 2G)	Forests and grass steppes. Recorded also for Orenburg distr (KAILA et al., 2003). L.: different Poaceae and <i>Carex</i> .	
47	<i>Elachista olschwangi</i> KAILA, 2003		+					+	eV-VI	LT: Southern Ural, Cheliabinsk distr., Moskov (KAILA et al., 2003). L.: unknown.	
48	<i>Elachista pollinariella</i> ZELLER, 1839				+	+	+	-	VI-mVII	L.: different Poaceae.	
49	<i>Elachista pollutella</i> DUPONCHEL, 1843				+		+	-	eIV-mV	Steppes and dry meadows. L.: unknown.	
50	<i>Elachista pullicomella</i> ZELLER, 1839				+	+	+		mV-VIII (in 2G)	Grasslands, from steppes to wet meadows. Recorded also for Cheliabinsk distr. (KAILA et al., 2003). L.: different Poaceae.	
51	<i>Elachista regificella</i> SIRCOM, 1849				+				VI-bVIII	L.: <i>Luzula</i> spp.	
52	<i>Elachista rudectella</i> STANTON, 1851				+		-	+	VI-mVII	Recorded also for Cheliabinsk and Orenburg distr. (KAILA et al., 2003). L.: <i>Phleum phleoides</i> .	
53	<i>Elachista spumella</i> CARADJA, 1920						+	+	mV-VII (in 2G?)	Chalk and limestone steppes. Recorded for Cheliabinsk and Orenburg distr. (KAILA et al., 2003). L.: unknown.	
54	<i>Elachista squamosella</i> (DUPONCHEL, 1843)	-	-					+	mVI- mVII	Recorded for Orenburg distr. (KAILA et al., 2003). L.: <i>Carex montana</i> .	
55	<i>Elachista subalbidella</i> SCHLAGER, 1847							-	-	eV-VII	Recorded for Cheliabinsk distr. (KAILA et al., 2003). L.: <i>Brachypodium</i> , <i>Poa</i> , <i>Molinia</i> .
56	<i>Elachista subocellea</i> (STEPHENS, 1834)						-	-	-	VI-VII	Recorded for Cheliabinsk distr. (KAILA et al., 2003). L.: <i>Brachypodium sylvaticum</i> .
57	<i>Elachista szocsi</i> PARENTI, 1978 (= <i>manca</i> FALKOVITSH, 1986)							+	eV-VI	Steppes of different types. Recorded for Cheliabinsk and Orenburg distr. (KAILA et al., 2003). L.: unknown.	
58	<i>Elachista tetragonella</i> (HERRICH-SCHÄFFER, 1855)	-	-	-		+			eV-VI	Single specimen was collected on stepped glade of mixed forest at 21.VI 1993. Recorded for Cheliabinsk distr. (KAILA et al., 2003). L.: <i>Carex montana</i> .	
59	<i>Elachista unifasciella</i> (HAWORTH, 1828)	-					-	+	-	VI-VII	L.: <i>Dactylis</i> , <i>Brachypodium</i> , <i>Holcus</i> .
60	<i>Biselachista albidella</i> (NYLANDER, 1848)						+	-	-	mVI-VII	Single specimen was collected on wet meadow of mixed forest at 9.VII 1997. Recorded for Cheliabinsk distr. (KAILA et al., 2003). L.: <i>Scirpus</i> , <i>Carex</i> spp.
61	<i>Biselachista contaminatella</i> (ZELLER, 1847)					+	-	-	mVII	Single specimen was collected in grass steppe at 18.VII 1999. Recorded for Cheliabinsk and Orenburg distr. (KAILA et al., 2003). L.: unknown.	
62	<i>Biselachista devexella</i>	-	-	-	-	-	-	-	VI	LT.: Southern Ural, Orenburg	

	(KAILA, 2003)											distr., Pokrovka (KAILA et al., 2003). L.: unknown.
63	<i>Biselachista scirpi</i> (STANTON, 1887)						+			mVI-VII		Salt marshes in grass and chalk steppes. L.: <i>Scirpus</i> , <i>Juncus</i> .
64	<i>Biselachista utionella</i> (FREY, 1856)					+	+	+		mVI-VII		Grass steppes and stepped biotopes. Recorded for Cheliabinsk and Orenburg distr. (KAILA et al., 2003). L.: <i>Carex</i> spp.
65	<i>Cosmiotes freyerella</i> (HÜBNER, [1825])			-		+			-	eV-VIII (in 2G)		L.: different Poaceae.
		1	2	2	1	1	3	9	0			
					6	6	2					

Thus, 65 species of Elachistidae are listed for the recent fauna of the Volgo-Ural Region. Among them, 64 species are recorded from the region in addition to EVERSMANN's list. At the same time it is sure that specific compound of the family is more rich in the Region. It will be added during following investigations and will be also changes on a basis of revisional work with different specific complexes undertaken with our colleagues.

References

- EVERSMANN, E. (1844): Fauna lepidopterologica Volgo-Uralensis. Tipogr. - Casani, 633 p.
- FALKOVITSH, M. I. (1990): Family Elachistidae. In: MEDVEDEV, G. S. (ed.), Keys to the insects of the European part of the USSR **4** (2): 628-687. E.J. BRILL, Leiden, New York, Kobenhavn, Köln.
- KAILA, L. (1999): Phylogeny and classification of the Elachistidae s. s. (Lepidoptera: Gelechioidea). - Systematic Entomology **24**: 139-169.
- KAILA, L., NUPPONEN, K., JUNNILAINEN, J., NUPPONEN, T., KAITILA, J.-P. & V. OLSCHWANG (2003): Contribution to the fauna of Elachistidae (Lepidoptera) of the Southern Ural Mountains. - Ent. fenn. **14**: 65-90, Helsinki.
- PARENTI, U. (1996): Elachistidae. In: KARSHOLT, O. & J. RAZOWSKI (eds). The Lepidoptera of Europe: 68-73. - Apollo Books, Stenstrup.
- SACHKOV, S. A. (1996): New for Europe species of Microlepidoptera (Lepidoptera: Scythrididae, Elachistidae) from Samara Region. - Actias **2** (1-2): 77-78.
- SACHKOV, S. A., ANTONOVA, YE. M. & A. V. SVIRIDOV. (1996): Moths and butterflies (Lepidoptera). In: Bespozvonochnye Zhigulyovskogo zapovednika. - Flora i fauna zapovednikov **61**: 48-132, Moscow (in Russian).
- SINEV, S. & V. SRUOGA (1997): Sem. Elachistidae – zlakovye moli-minery. In: LER, P. A. (ed.). Key to the insects of Russian Far East **5** (1): 491-502. Dal'nauka, Vladivostok (in Russian).
- TRAUGOTT-OLSEN, E. & E. SCHMIDT NIELSEN (1977): The Elachistidae (Lepidoptera) of Fennoscandia and Denmark. - Fauna Ent. Scand. **6**: 1-299, Helsinki.

ZOLOTUHIN, V. V. (2001): Materials on the rare and new species of moths (Microlepidoptera) of the Middle Volga. - Entomological and parasitological investigations in Povolzh'e Region 1: 44-47 (in Russian).

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